(b) if so, the details thereof;

(c) whether the preparatory work to use the capabilities of Cartosat-I are progressing as per plans; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) Yes Sir, Cartosat-I Satellite mission, to be launched in the near future has the capability to systematically cover the country with along-track stereo images with 2.5m. spatial resolution and 30 Km. swath. This unique high-resolution along-track stereo imaging capability, carried out for the first time anywhere in the world, will enable operational generation of the Digital Elevation Models (DEMs) and various derived value added products thereon. The mission is expected to provide enhanced inputs for various large scale mapping applications and stimulate newer applications in the urban and rural development; land and water resources management; disaster assessment; relief planning and management environment impact assessment; and various other applications of Geographical Information System. Survey of India could make use of the Cartosat-I data for updating their topographic maps, besides making use of them in the generation of Large Scale topographic maps.

(c) and (d) Pilot activities for the generation of along-track stereo images and the Digital Elevation Models (DEM) have been satisfactorily completed. Activities pertaining to large scale base maps at 1:10,000 scale and related techniques for parameter retrieval etc. are already initiated, and these activities are likely to get a further boost after the launch of CartosatI.

Satellite Navigation System

2586. SHRI C. RAMACHANDRAIAH: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that country is planning a regional satellite navigation system, similar to the global positioning system of the United States;

(b) whether there are any plans for India to participate in Galilio the European Lad efforts to create an alternative to the GPS System;

(c) if so, by when the country would join the programme; and

(d) by when it would set up regional navigational systems that would be totally under its control?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) Yes, Sir. India is planning an Indian Regional Navigation Satellite System (IRNSS) which is confined to Indian Region. This System will not be like the GPS of US.

(b) The question of participation is under consideration of Government.

(c) Does not arise.

(d) The IRNSS Project is under consideration of Government.

Earthquake vulnerability of Andaman Islands

2587. SHRI E.M. SUDARSANA NATCHIAPPAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Andaman Islands are very sensitive to earthquake;

(b) if so, whether Government propose to set up a state of the art laboratory for this purpose; and

(c) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) Yes, Sir. Andaman Islands falls in Zone-V of the seismic zoning map of the country published by Bureau of Indian Standards in 2002. As per this map, the country has been divided into four seismic zones, Zone II to Zone V, Zone V is considered to be the most vulnerable to earthquakes, while Zone-ll is the least.

(b) and (c) At present a state-of-the-art seismic observatory is functional at Port Blair to record the earthquake activity in the region. Also, efforts have been initiated to establish a multi-parametric geophysical observatory to monitor different parameters related to earthquake activity.